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# Transmit

## A Publication of the Arizona Public Safety Communications Commission (PSCC)

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## Our Mission:

To enable real-time, interoperable communications between local, county, state, tribal, and federal public safety entities in the State of Arizona to effectively protect lives and property.

PSCC

Transmit

PSCC Executive Director's Log

# Minor jailbreak proves meaningful

Curt Knight

***. . . the incident showcased, rather incredibly, just how well first responders from multiple, distinct public safety agencies can work together to protect the public when they can talk directly to one another . . .***

As you will learn from reading the article on page 3 of this issue of *Transmit*, four prisoners recently escaped from the annex to the Mohave County Jail in Kingman, Arizona.

The incident garnered very little, if any, media attention, probably because three of the low-risk, non-violent prisoners were captured within just 30 minutes of climbing over a fence marking the outer perimeter of the small detention facility.

Although the event was not necessarily an extreme threat to public safety and this is likely the first time you are even hearing about it, it actually proved very meaningful to those working to advance Arizona's emergency services communications system.

After all, the incident showcased, rather incredibly, just how well first responders from multiple, distinct public safety agencies can work together to protect the public when they can talk directly to one another via an emergency services communications system in real-time and without complicated workarounds.

Amazingly, the highly beneficial interoperability first responders achieved following the jailbreak came on an extremely simple, limited communications system recently established as only an interim solution to some of Arizona's current and dangerous interoperability shortcomings.

With this system becoming fully operational throughout Arizona, it is just a matter of time before it proves to be highly advantageous during other emergencies and helps the Arizona Public Safety Communications Commission (PSCC) demonstrate why interoperability is so crucial to protecting the public.

Any support that stems from such events, perhaps incidents where lives are saved through interoperability, will only help us in our effort to bring a much more advanced, next-generation interoperable public safety radio system to Arizona.



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# PSCC welcomes Jeff Miner as its new Project Manager

*Long-time Arizona resident brings a vast amount of telecom expertise to the critical position*

The Arizona Public Safety Communications Commission (PSCC) is very pleased and excited to announce it has filled one of the most important and challenging positions in its support office with a highly experienced and dynamic telecommunications veteran.

This new addition is Jeff L. Miner, a long-time Arizona resident who recently replaced Kevin Rogers as the PSCC Project Manager.

***Jeff Miner at work in the PSCC Support Office***

The Project Manager position within the PSCC Support Office became vacant in November when Rogers left the post after 18 months to become manager of the Department of Public Safety's Wireless Systems Bureau.

Miner brings a vast amount of experience in telecommunications project management and engineering to the critical position which was created to ensure day-to-day progress is made in achieving the PSCC's mission.

Specifically, Miner will be charged with picking up where Rogers left off in putting together the exact plan for advancing the emergency services communications system in Arizona so it can meet all of the critical interoperability needs of the state's first responders.

He will also be responsible for assembling the appropriate players in the effort and assisting with complex technology decisions.

"I will also be responsible for communicating the direction and status of our efforts to our stakeholders," said Miner, adding he will also be available to assist the Executive Director of the PSCC, Curt Knight, with any other related tasks or projects that may surface.

Miner has successfully managed a myriad of complex, large-scale telecommunications projects during his career.

However, the proudest and most significant accomplishment of his career thus far occurred during his 13 years of employment (from 1993 to 2006) with the City of Phoenix.

It was during that time period that Miner served as the lead engineer behind the design, procurement and construction of the state-of-the-art, fully digital, 800 megahertz trunked radio system that the City of Phoenix, in conjunction with the City of Mesa, financed to replace their aging, disparate radio systems.

This 800 megahertz system, a large portion of which was named the Phoenix Regional Wireless Network (PRWN), supports every public safety and public service department operating in both Phoenix and Mesa.

It has been drawing rave reviews from its more than 14,000 subscribers since the final acceptance of the system in December of 2005.

Not long after overseeing the completion of that colossal project, Miner retired from the City of Phoenix and began looking for other challenging telecommunications undertakings in

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# AERS proves highly useful during jailbreak in Kingman

On a cold, crisp afternoon in early November, four prisoners executed a rather brazen escape from the annex to the Mohave County Jail located on the western side of Kingman, Arizona.

The incident, which proved to be a bit unnerving for those residing near the small detention facility, prompted one of the first lengthy, unscheduled activations of the new Arizona Emergency Radio System (AERS) in the region.

This system was recently established to provide the state's first responders with interim-term interoperability improvements while the long-term process of building a much more advanced, next-generation interoperable public safety radio system occurs.

In the end, the AERS radio system, which will be fully configured for statewide use on May 1, was activated for roughly three hours following the jail break.

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## Jailbreak ...

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It provided the 45 to 50 officers from the three separate law enforcement agencies that responded to the Nov. 2 incident with the ability to talk directly to each other in real-time while they conducted an aggressive, coordinated search for the escapees.

Thanks to the new system, these officers were not forced to make guesses as to what another agency's officers were doing or how the overall search was proceeding as a result of being stuck on their own agency-specific radio systems.

The interoperability provided by AERS during the incident especially helped when first responders from the three agencies had to work closely together to coordinate tasks like the creation of effective, solid perimeters.

> We have never had the ability to communicate on that level and coordinate that many officers from different agencies."

"The shared system (AERS) worked extremely well and allowed us to interoperate and ultimately use our first responder resources more strategically," said Lt. Ron Delong, who commands DPS' highway patrol force in the Kingman-area. "It was a very new experience for first responders in this area. We have never had the ability to communicate on that level and coordinate that many officers from different agencies."

Specifically, Delong said the use of AERS let those coordinating the exhaustive search effort know exactly how many first responders were assisting, what agency they were from, and where they were located at any given moment.

"Overall, the jailbreak proved to be a very good trial run of AERS, especially because we used it to ensure we did not have officers from different agencies duplicating efforts by looking in the same place for the escapees," Delong said. "We have had several major incidents occur in Kingman in years past where we didn't know what officers or other first responders we had running around and what they were doing. That was because each agency couldn't communicate this easily with another agency's personnel."

Several of Delong's highway patrol officers participated in the search along with officers from the Kingman Police Department and the Mohave County Sheriff's Office.

Supervisors from these agencies made the decision to activate AERS and place all of their officers on the shared system as soon as it was determined that real-time interoperability was needed to conduct a safe, efficient and coordinated search.

Considering it was one of the very first times AERS was used during an unscheduled major multi-agency incident in Arizona, the process of systematically getting officers quickly placed onto the new system and taken off of their respective agency's radio systems went well.

"A roll call situation ensued as each new officer came onto AERS allowing us to carefully track who was on the system and actively assisting in the search," said Delong, adding that the dispatcher with the Mohave County Sheriff's Office who handled all of the AERS radio traffic during the incident did an incredible job.

As it turned out, three of the prisoners were apprehended in a mountainous area near the jail within just 30 minutes of their escapee.

The fourth prisoner, however, remains elusive to this day and Delong said it was during the end of the lengthy search for this individual that AERS provided the most comfort to those assisting in the search.

"This had been a pretty intensive, lengthy search and by the time it started to get dark we were able to use AERS to do a final roll call," Delong said. "This final roll call let us know within minutes that every officer from each agency was safe and accounted for. It was a very good feeling when we knew that all officers were safe and had gone back to their home agency's radio systems."

Delong said first responders in the Kingman-area have had ways to achieve limited interoperability in the past, but AERS is the first interoperable system in the region allowing first responders to be dispatched out of one communications center.

In what is an interesting side note to this story, the portion of the AERS system used during this jailbreak had only become available for use in Kingman a day before the incident.

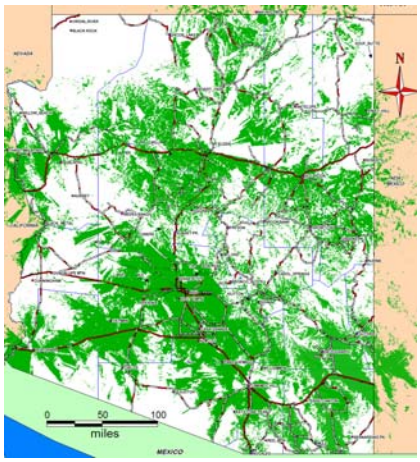
The overall system, which makes incredible use of some of Arizona's existing, or legacy communications equipment, is quickly becoming fully operational throughout the state. Stay posted for further updates on this new system.


# Interoperability improvements provided by AERS realized statewide

*Final configuration, performance testing and acceptance of system to be completed on May 1*

The DPS Wireless Systems Bureau, Department of Emergency and Military Affairs and the Public Safety Communications Commission (PSCC) have scheduled the installation and full operational readiness of 26 Arizona Emergency Radio System (AERS) sites as of May 1, 2007. Although many of the sites are operational today, final system configuration, performance testing and customer acceptance will be fully completed on May 1, 2007.

To take full advantage of the interim interoperability improvements the AERS radio network brings to Arizona's first responders, all users must first have entered into a Memorandum of Understanding (MOU) with the Public Safety Communications Commission and have programmed their mobile and portable radio equipment to take advantage of the AERS radio network.




**AERS coverage area**

*A conservative estimate of the AERS coverage area is represented by the green colored portions of this map.*

The MOU may be initiated online as well as a print-ready, hard copy. Both are accessed on the PSCC website at: http://www.azdps.gov/pscc/survey.asp.

A conservative estimate of the coverage areas provided by the Arizona Emergency Radio System (AERS) - VHF, UHF, and 800 MHz mutual aid channels - is represented by the green colored portions of the map included with this article.

Expanded and revised mobile and portable programming information will also be available on the PSCC website soon after the January 23, 2007 Statewide Interoperability Executive Committee meeting.

Future issues of *Transmit* will feature additional updates on AERS, an interim interoperability solution that is making use of this state's existing communications equipment.

# Bi-national spectrum sharing agreement a "win" for public safety

A bi-national spectrum sharing agreement signed Nov. 1 by senior state department and telecommunications officials from the United States and Mexico will prove to be a huge "win" in the effort to advance public safety communications capabilities in the U.S.-Mexico border area.

In Arizona, the historic agreement makes available much needed additional spectrum for Arizona's first responders operating in close proximity to the U.S.-Mexico border.

Specifically, the agreement gives public safety licensees in the U.S., including the PSCC, access to an additional twelve megahertz of primary spectrum in the border area that can be used for next-generation public safety radio systems.

Prior to the agreement, this key spectrum was unusable within several miles of the border by public safety licensees in the U.S. because of possible interference issues related to Mexico's utilization of the same spectrum.

The spectrum that became available as a result of the agreement is located within the 700 MHz band which is one of the only areas where large blocks of available, well organized spectrum still exist in the U.S. for the development of advanced, emergency services communications systems.

Arizona holds a license in this important 700 MHz band for use by public safety entities statewide in advancing their communications systems but the band simply couldn't be used close to the U.S.-Mexico border prior to this agreement.

This limitation placed first responders operating in Arizona's border area at risk of possibly being left out of future advances in communications systems that may take advantage of the additional spectrum.

Although the PSCC has yet to formally decide to incorporate the 700 MHz spectrum in future communications systems designs, "it is a valuable resource we definitely can't ignore," said Curt Knight, the Executive Director of the PSCC.

The agreement also supports the operations of commercial entrepreneurs who are expected to deploy advanced wireless services along the border.

The agreement will be implemented by the FCC in the United States and by the Ministry of Communications and Transportation and the Federal Telecommunications Commission in Mexico.


## Miner ...

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which he could apply his skills.

"Ideally, I wanted to find a complex, large-scale project that was still in its early planning stages," Miner said. "I have a very strong desire to keep working because I know I am too young to spend my retirement in a rocking chair."

Like anyone who has been involved in public safety communications projects in Arizona, Miner was very familiar with the state's interoperability initiatives and was involved, at an arms length, with the activities of the PSCC.

In fact, the PSCC's mission of enabling real-time, interoperable communications between virtually all distinct public safety agencies in Arizona through the creation of a new statewide system was always something he truly believed in and felt he could help achieve.

Among the pressing challenges Miner faces in his new role will be helping the PSCC achieve a "quick, substantial win."

However, until the Project Manager position with the PSCC Support Office became vacant in November, a job that would allow him to best use his skills and abilities in this historic effort simply did not exist. That is why he feels so fortunate to have joined the PSCC Support Office in this essential role, especially because he knows the PSCC's mission is fully attainable with hard work and some political cooperation.

"The ability for Arizona to realize a true interoperable solution for its emergency services communications system is more attainable now than it has been at any other point in history because of the priority currently given to public safety projects," Miner said. "This is an extremely exciting time to be involved in this initiative."

Among the pressing challenges Miner faces in his new role will be helping the PSCC achieve a "quick, substantial win" by getting a pilot project underway that demonstrates, on a small scale, what a true interoperable solution can actually look like in Arizona.

"Establishing a pilot project in a timely manner that showcases the benefits of true interoperability within a portion of Arizona's emergency services communications system should allow us to parlay the resulting excitement and support into obtaining the resources necessary for building out the system statewide."

Miner, who was born and raised in the Chicago area of northwest Indiana, was introduced to the field of telecommunications as a teenager while helping his father repair two-way radios in what was one of Motorola's very first service shops for police, fire, and industrial communications equipment.

His father and grandfather started the business in the late 1940's just as two-way radios were proliferating and becoming reliable and effective communications tools, especially for public safety workers.

"I became quite fascinated with the world of telecommunications while working for my dad and I never really thought about pursuing a career in any other field," Miner said.

After graduating from high school, Miner studied engineering at Purdue University while continuing to help in the family business. Shortly after his 22nd birthday, and only that much more convinced that telecommunications work was his calling, Miner and his wife loaded up a rented U-Haul truck and headed to Arizona. It was there that Miner had secured a job as a communications technician with the Arizona Department of Public Safety.

Within just a few years of accepting employment with the state law enforcement agency, he had become a rising star within the organization's Telecommunications Division, the entity that became today's Wireless Systems Bureau at DPS.

After receiving a promotion to communications engineer at DPS in 1983, Miner oversaw the successful completion of the western Arizona microwave loop and the installation of new communications facilities at Willow Beach and the Grand Canyon. The Indiana transplant also oversaw the creation of a new UHF radio system for DPS' Criminal Investigations Division.

Miner's rapidly increasing experience and ability to tackle large, complex telecom projects under a variety of constraints led him to pursue new challenges by accepting the position of Communications System Supervisor at DPS.

While in this position, which he held for roughly four

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## Miner ...

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years, he managed a team of communications technicians and was charged with installing and maintaining the agency's expansive statewide microwave network.

Miner was also briefly responsible for the planning, maintenance and engineering of DPS' statewide telephone and data networks before accepting the job with the City of Phoenix in 1993 that led to his substantial role in the creation of the city's new 800 megahertz trunked radio system.

After the successful completion of the construction phase of that project in 2005, he took on the role as the Operations Manager for the network.

While he enjoyed this job of managing the day-to-day operations of the system he helped create, the real challenge of meticulously planning and building the initial network was over.

His mind naturally drifted towards new and perhaps even more challenging telecommunications projects. Thankfully, the Project Manager position with the PSCC opened up not long after he retired from the City of Phoenix and it appears to be a perfect fit for his knowledge, skills, abilities, and desire to shape a project from its early stages through completion.

"I believe this is a job that suits me very well and I am looking forward to being involved in this historic project until the PSCC's important, lifesaving vision is attained," Miner said.

When he is not working, Miner enjoys hiking and traveling with his wife.

## Recent survey reveals levels of interoperability across the nation

The Department of Homeland Security (DHS) announced Dec. 8 the results of a nationwide survey of first responders and law enforcement that assesses progress in achieving interoperable communications.

The national interoperability baseline survey was issued to 22,400 randomly selected law enforcement, fire response, and emergency medical services (EMS) agencies, and confirms that roughly two-thirds of emergency response agencies across the nation use interoperable communications at varying degrees.

"The survey reinforces the fact that interoperability is achievable," said Homeland Security Secretary Michael Chertoff. "It also reinforces the fact that technology works and is available. The willingness of emergency response leaders and local officials to make this issue their priority is what will continue to drive progress on one of 9/11's most important lessons."

Survey findings indicate that agencies tend to be more developed in technology than they are in culturally related areas like standard operating procedures and exercises. It showed cross-discipline and cross-jurisdiction interoperability at local levels tends to be more advanced than it is between state and local agencies.

The national interoperability baseline survey is the first interoperability assessment that uses a comprehensive definition for interoperability. It was designed in partnership with the emergency response community and assessed stages of development in five areas: governance, standard operating procedures, technology, training and exercises, and usage.

The survey had a statistically valid response rate of 30 percent, with 6,816 agencies responding. Participation in the survey was evenly split between law enforcement, fire response and EMS. Additional baseline survey findings are available on the SAFECOM website at www.safecomprogram.gov.

## Public safety telecom jobs open

The following telecommunications positions are currently open within the Arizona Public Safety Communications Commission (PSCC) and the Wireless Systems Bureau of the Arizona Department of Public Safety (DPS). The PSCC is going to begin advertising some of the open public safety telecommunications positions throughout Arizona in issues of *Transmit*.

Advertising such openings will serve as a means of promoting healthy, professional staffing levels within the public safety units that help ensure the security of Arizona's citizens through specialized telecommunications work. Healthy, professional staffing levels within these units will also help the PSCC advance Arizona's emergency services communications system. For more information about the following positions, including salary levels, please call DPS' Human Resources Bureau at (602) 223-2290 or visit DPS' website at: www.azdps.gov

TELECOMMUNICATIONS SUPERVISOR -FLAGSTAFF
TELECOMMUNICATIONS TECHNICIAN - FLAGSTAFF - PHOENIX
TELECOMMUNICATIONS ENGINEER I - PHOENIX
TELECOMMUNICATIONS DRAFTING TECHNICIAN - PHOENIX

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